

**ABSTRACT OF THE DISCLOSURE**

A data processing system using a main processor 8 and a coprocessor 10 provides coprocessor load instructions (USALD) for loading a variable number of data values dependent upon alignment into the coprocessor 10 and also specifying data processing operations to be performed upon operands within those loaded data words to generate result data words. The specified coprocessor processing operations may be a sum of absolute differences calculation for a row of pixel byte values. The result of this may be accumulated within an accumulate register 22. A coprocessor memory 18 is provided within the coprocessor 10 to provide local storage of frequently used operand values for the coprocessor 10.

[Figure 2]